AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
******	1 | 1

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
0002	03 APR 14	98300 /30359109	

6. ISSUED BY CODE N65540

NSWC CARDEROCK DIVISION
5001 S. BROAD STREET, CODE 3353
PHILADELPHIA PA 19112-1403
BUYER/SYMBOL: L. STIEMKE
PHONE NO. 215-897-1355

7. ADMINISTERED BY (If other than item 6) CODE

8. NAME AND ADDRESS OF CONTRACTOR (No.,street, county, State and ZIP Code)

(X) 9A. AMENDMENT OF SOLICITATION NO.

X N65540-03-Q-0231

9B. DATED (SEE ITEM 11)

03 MAR 14

10A. MODIFICATION OF CONTRACT/ORDER NO.

10B. DATED (SEE ITEM 13)

CODE FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [X] is extended, [ ] is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods.

(a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATION OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

1) BLOCK 8 OFFER DUE DATE IS CHANGED FROM 18 APRIL 2003 TO 22 APRIL 2003.

2) THE REQUIRED DELIVERY OF THE DATA ACQUISITION SYSTEM IS CHANGED FROM 30 DAYS AFTER THE DATE OF ORDER TO 60 DAYS AFTER THE DATE OF ORDER.

3) RESPONSES TO QUESTIONS ARE ATTACHED (4 PAGES).

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED

ATTACHMENT
N65540-03-Q-0231
AMENDMENT 0002

RESPONSES TO QUESTIONS FOR RFQ N65540-03-Q-0231

1. What is the voltage input of the high level transducers and what are they measuring? High-level transducer measurements are various measurements provided from ship control indicating certain ship characteristics such as pitch, roll, and depth. Voltage input is expected to be 10V, but variations are possible as NSWC has no control over characteristics of these measurement systems.

2. Is there any software or hardware preference? Care was taken so that any system which meets the technical specification should be suitable for this application. Fair consideration will be given to all quotes meeting the specifications.

3. Are the sensors and associated wiring a deliverable as part of this package or will the user be using existing sensors which will be wired into new DAQ system? Existing sensors will be used.

4. Please define any installation requirements and associated support needs further. i.e. is vendor expected to wire up entire system in unit? NSWC and the shipyard will be responsible for external wiring of the system. Vendor is expected to provide adequate documentation and informational support.

5. 30 day delivery is specified by unique software requirements may not be possible. Does user plan on implementing existing commercial off-shelf hardware/software to meet this timeframe and if so what is preference of packages desired to meet tasks? The user plans on implementing existing commercial equipment. Fair consideration will be given to all quotes on systems meeting the technical specifications.

6. 1.3 Describes a scan rate of greater than 30 scans per second per channel for 350 channels. Must this be simultaneously sampled or can it be sequentially sampled? Simultaneous sampling is preferred, however, sequential sampling will meet minimum requirements.

ATTACHMENT
N65540-03-Q-0231
AMENDMENT 0002

7. 1.4.1 Describes programmable gain "to implement full scale input ranges of 1, 2, 4, 5, and 10 V". These are very high levels for strain gage input signals, requiring very little channel gain, is there preamplification in line with the strain gage signal lines? What is the strain gage type being used? What is the desired accuracy of the Channel gain? What is the accuracy of the overall Strain/RTD measurement? There is no preamplification. A variety of strain gages are being used 350 ohm, constantan foil gages to weldable gages with nickel chrome element, sizes ranging from 1/8 inch to 1 inch. No requirements have been put on gain/strain accuracy, however that information has been requested as information. Accuracy requirements for this application are not anticipated to be more stringent than for typical commercial applications.

8. 1.4.1 Describes Low-Pass filter between 4 Hz and 10 Hz, we are assuming this to be a fixed frequency filter. What is the desired order and characteristics of this filter? A fixed frequency filter is fine. There are some quasi-dynamic phenomena which are of some interest which fall below the 4 Hz threshold. Send any information on filters available. Any filters available in a commercially available system should be adequate.

9. 1.4.3 What is the desired accuracy on the thermocouple measurement? How far will the thermocouple be from the signal conditioner? Are any thermocouples mounted on rotating parts requiring compensation of the slip ring thermocouple effect? The standard accuracy associated with K-type thermocouples is adequate. Thermocouples may be up to approximately 50 feet from the signal conditioner. There are no thermocouples mounted on rotation parts.

10. 1.4.4 Describes High Level Transducer Hardware? What is a high level transducer? Is this a preconditioned sensor or pre-amp with a large voltage output signal? High level transducers will provide signal in DC volts relating to ship's characteristics such as ship attitude, depth, and certain pressure readings. Other details concerning sensor design characteristics are not available.

ATTACHMENT
N65540-03-Q-0231
AMENDMENT 0002

11. In Section 1.6 of the Data Acquisition Specification it mentions specific cabinet sizes. Are these sizes flexible, and to what degree? It appears that the solution requires a smaller Cabinet A, but a larger Cabinets B &C. Cabinet sizes are dependent on space and fixtures available at the shipyard. A smaller cabinet size may be modified by the vendor to the desired dimensions provided that the modifications do not produce structural weakness which will result in a less protective or secure enclosure for the equipment.

12. Is it ok to go to 25" depth on the cabinets?
No, cabinets larger than specified will not fit in existing spaces.

13. How are the cabinets to be mounted? In a standard rack (please specify) or is it wall-mount or floor-mount? The widths specified do not indicate standard rack mounting.
The cabinets will be mounted in fixtures available aboard ship. Specified cabinet sizes are appropriate for available facilities.

14. Is it acceptable to use aluminum cabinets? Aluminum cabinets are not appropriate because of the harsh conditions expected during the construction phase of the ship. Cabinets may inadvertently be holding the weight of a large person carrying tools or heavy equipment.

15. What are the environmental specs for the packaging in terms of shock, Vibration, temperature, etc. Right now we are assuming COTS specs. Equipment should be appropriate for use in a typical commercial field application.

16. As I read through the requirements I get the impression that the required software is very specific for the desired application. Then I came across the statement "All software must be currently existing and in use in current commercial applications." Having been a System Integrator for many years and having quoted similar systems; your software requirements may be difficult to meet unless a custom application is proposed. In essence, I can interpret the software requirements in the aforementioned statement in two ways.

ATTACHMENT
N65540-03-Q-0231
AMENDMENT 0002

1) A commercial off-the-shelf shrink-wrapped package that meets as many requirements as possible, if one exists.
2) An application that is written in a commercially-available development environment such as National Instruments' LabVIEW, which will meet all of the stated specifications in addition to allowing for future expansion and modifications. LabVIEW is designed specifically to create data acquisition and control solutions and is the industry-leading Test & Measurement development platform.

Can you let me know which one of my interpretations is closest to the intent of the statement or if either option is viable?
The requirement is to have commercially available software which can meet the detailed specifications. Software which is currently in commercial use will have been field tested by customers and shown to be functionally acceptable through commercial viability. There is no time/funding/manpower available at this time for testing new software adequately.

17. In the Data Acquisition Systems (DAS) Specification Section 1.1, the last sentence of this section says "The system will consist of hardware to collect gage and transducer signals, software for data collection and analysis, cabling and associated equipment for use with user supplied laptop computers, and cabinets for housing hardware." This would imply that the user is going to supply the cabinets but in Section 1.6 it says, "the Data Acquisition System shall be furnished with steel cabinets which allow access to switches and connections." These two sentences are confusing. Does the supplier need to provide cabinets to house the Data Acquisition System? If the cabinets do need to be supplied, can the cabinets be less than size specified in section 1.6?
The supplier does need to supply the cabinets. A smaller cabinet size may be modified by the vendor to the desired dimensions provided that the modifications do not produce structural weakness which will result in a less protective or secure enclosure for the equipment.